

SUPPLY CHAIN – Optimization and Simulation

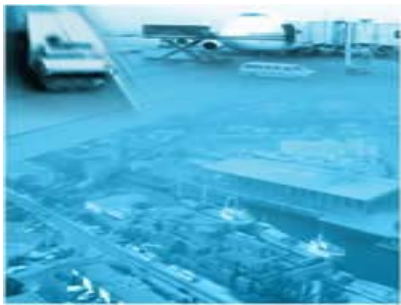
Are you re-engineering your Supply Chain? Our unique core business is to provide you the best optimization and simulation tool as well the specialist support. **Optimize the Supply Chain or, better, the Supply Net means to harmonize several variables and many objectives and sub-objectives.** Optimize one node doesn't necessarily mean a global benefit. Our products, based on the power of math and dynamic models, are a great decision making support. Our customers benefit greatly of our Optimization tool!

Supply Chain Optimization

The management of goods and products flow within a net, from source to the final destination, is a focal element to be competitive. Over the net it must be guaranteed a strategic balance between costs and service levels. You need to coordinate two levels of optimization: the



first one correctly dimensioning the net, like to have warehouse in the best position for example; the second one during the operations managing the daily flows. Despite the tools can give a great support, the main initial focus is to correctly define the methodology the aims. Our Models and optimization tools are the key to optimize the Supply Chain or the Supply Net. OPT Net for example is a powerful engine that permits you to solve different kind of allocation problems like linking sources and destinations minimizing cost or to find the best location of warehouses and distribution centers and stores.



Other tools, like **BEST Shipping, Arena, SIMIO, OPT Quest**, are supporting the design or the operations considering the variability and randomness that affect the **Supply**

Chain and the Supply Net.

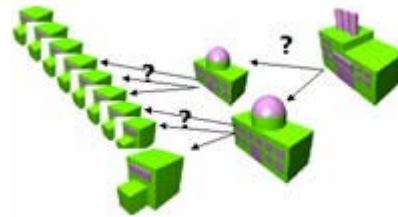
ACT Solutions supports companies that invest in a collaborative reality, offering modules and solutions that allow you to plan and manage the entire supply chain. Reducing costs of its partners in the Supply Chain or simply transfer them upstream or downstream, does not make companies more competitive. In this way the cost will come however in the final market price paid by the consumer. **The real competition is no longer company against company but supply chain against supply chain!**

It is necessary to increase the value and reduce overall costs:

- conducting a comprehensive strategic planning,

Supply Chain Simulation

Take a closer look to your future...



Supply Chain Simulation with Arena and SIMIO! The Supply Chain as well Logistics, have a high return form simulation approach. This is mainly due to the important process variability that

make difficult to understand and predict the dynamic relation among variables and KPI.

Your Supply Chain is a complex dynamic and stochastic system. Image the benefit you can have if you'd have a virtual system able to predict what will happen in your Supply Chain if you change something! Image the benefit you can have knowing exactly how the process will react when some external factor and variables change. Let imagine this prediction is over the time (like a movies) and imagine that it considers the randomness that naturally affect your system and your future.

You are imaging to have a dynamic and stochastic simulator.

Supply Chain dynamic simulators, compared with the traditional what-if functionalities you can find inside ERP or you can perform with spreadsheet, have the power to explain the dynamic relation among the variables and parameters that characterize the process. With a Supply Chain simulator you can: evaluate how the Supply Chain performs in term of cost and service levels. For example you can:

- evaluate the response of the system in case in which the demand variability will increase;
- compare alternatives in term of infrastructure;
- understand how each participants of the Supply Chain influence the overall performance;
- improve the overall Supply Network;
- evaluate inventory policies;
- verify cash flow and financial performances;
- evaluate constraints.

ACT Solutions modeling specialists can support you in creating effectiveness simulators using the correct technology. Arena Simulation and SIMIO are leader platform to create hierarchical models that often are useful to

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- identifying appropriate performance indicators,
 - structuring in an optimal way the transmission network,
 - sharing information,
 - taking into account different scenarios.
- represent Supply Network.

The solutions by ACT Solutions include:

- Logistics Optimization
- Optimization of production
- Optimization of transport and cargo
- Simulation as decision support
- Risk management and disaster modeling